

MAUERMANN, Zdenek, inz.

On dependent position deviations. Normalizace 12 no. 5:
124-127 My '64.

1. Automobilove zavody National Enterprise, Mlada Boleslav.

NADVORNIK, R.; BERAN, J.; NEMCEK, S.; ROZSIVAL, V.; MAUERMAN, Z.; GABRIEL, J.

Clinical and anatomical correlations in spinal cord injuries
(methodical study). Rozhl. chir. 43 no.10:658-662 O '64.

1. Neurochirurgická klinika (prednosta prof. dr. R. Petr),
Ustav soudního lékařství (prednosta doc. dr. J. Beran),
lékarské fakulty Karlovy University v Hradci Králové.

MAUERMANN, Zdenek

Numbering of standardized parts for the purposes of computing stations. Normalizace 13 no.1:8-12 Ja '65.

1. Automobilove zavody National Enterprise, Mlada Boleslav.

MAUEWSKA, Janina; JORDAN, Marian

Determination of nitrogen in acrylonitrile polymers. Chem anal 5
no.6:1039-1044 '60. (KKA1 10:9)

1. Synthetic Fibers Department, Institute of Artificial and Synthetic
Fibers, Lodz.

(Polymers and polymerization) (Nitrogen)
(Acrylonitrile)

RUMANIA / Human and Animal Physiology. Excretion. T

Abs Jour: Ref Zhur-Biol., No 9, 1958, 41457.

Author : Radulescu, I.; Dinischiotu, G. T.; Maugsch, C.;
Ionescu, C.; Teodorescu-Exarcu, I.

Inst : Not Given.

Title : Investigation of the Renal Function in Industrial
Lead Poisoning.

Orig Pub: Med. interna, 1957, 9, No 5, 724-736.

Abstract: Glomerular filtration and the urea clearance coefficient were depressed in 25% of patients with occupational Pb poisoning (more frequent during lead colic). Slight Na retention in the blood was observed in those patients. The disturbance of

Card 1/2

MAUESCH, M.

DANIELLO, L.; TIMOC, I.; MIADIN, Tr.; MAUESCH, M.

Considerations on certain manifestations of tuberculous nature,
occurring in the pulmonary lymph nodes during antibiotic therapy.
Rumanian M. Rev. 1 no.1:48-51 Jan-May 57.

(TUBERCULOSIS, ther.

isoniazid, PAS & streptomycin, post-ther. manifest. in
pulm. lymph nodes)

(LYMPH NODES, eff. of drugs on

isoniazid, PAS & streptomycin ther. of tuberc., post-ther.
manifest. in pulm. lymph nodes)

TIMOC, I.; HICA, L.; PETRESCU, G.; MAUKSCH-KOVATS, M.; GULCITGHI, N.

Pulmonary excision in a child aged six months. Rumanian M Rev. no.3:
36-37 JI-S '60.

(PNEUMONECTOMY in inf. & childh.)

~~DESS~~, Imrene; MAUL, Ferenc.

Studies in the nutritive value of corn(maize). Agrochem talajtan 10
no.3:335-352 S '61.

1. Agrartudományi Egyetem Talajtani Tanszék, Godollo.

RACSO, Albert; MAUL, Ferenc; SZABO, Bela

Data on the study of the brown forest soils of Kemeneshat.
Agrokém talajtan 2 no.1:1-12 Mr '62.

1. Agratudományi Egyetem, Talajtani Tanszék, Godollo.

MAUL, Kerlernst, ins. (Leipzig)

New veneer cutting machine FRS 16/26. Drévo 17 no.2:50-53
? '62.

MAUL, Karlernst, inz. (Leipzig)

Unification of the prduction of veneer peeling machines in the
socialist countries. Drevo 17 no.9:289-290 S '62.

SOKOLOVA, N.; MAULENBERDINA, U.; ANNENKOVA, A., red.

[The 40th anniversary of the Kazakh Soviet Socialist Republic;
methodological materials for lectures and talks] K sorokoletiiu
Kazakhskoi Sovetskoi Sotsialisticheskoi Respubliki; metodicheskie
materialy. Sbornik II. Alma-Ata, 1960. 29 p. (MIRA 15:4)

1. Alma-Ata. Gosudarstvennaya respublikanskaya publichnaya biblioteka.
(Kazakhstan--Economic conditions)

SEREDENKO, M.M., doktor ekon. nauk; ALEKSANDROVA, V.P.; KUGUSHEV, M.F. [Kuhushev, M.F.]; SHEVCHENKO, Ya.O.; GLAMAZDA, A.D. [Hlamazda, A.D.]; ZAPORSKAYA, Z.M. [Zabors'ka, Z.M.]; KHOTIMCHENKO, M.M. [Khotymchenko, M.M.]; YATSKOV, V.S.; MEDVEDEV, V.M. [Medvediev, V.M.]; CHIRKOV, P.V. [Chyrkov, P.V.]; KHARCHENKO, P.F.; SOTCHENKO, Z.Ya.; PROFATILOVA, L.M. [Profatylova, L.M.]; MAULIN, M.O.; GORELIK, L.Ye. [Horelik, L.IE.]; RIZHKOV, I.I. [Ryzhkov, I.I.]; ZHEREBKIN, G.P. [Zherebkin, H.P.]; KHRAMOV, O.O.; LANDYSH, B.O., red.; ROZENTSVEYG, Ye.N. [Rozentsveih, IE.N.], tekhn. red.

[Economic efficiency of capital investments and the introduction of new machinery in industry] Ekonomichna efektyvnist' kapital'-nykh vkladov i vprovadzhennia novoi tekhniki u promyslovosti. Kyiv, Vyd-vo Akad. nauk URSR, 1962. 260 p. (MIRA 16:2)

1. Akademiya nauk URSR, Kiev. Instytut ekonomiky.
(Capital investments) (Technological innovations)

VLADIMIROV, N.P.; MAUMENKOV, N.L.; RASSOMAKHIN, G.I.; SKUGAREVSKAYA, O.A.

Experimental studies of the phenomena of electromagnetic field formation
in a multilayered medium. Izv.AN SSSR Ser.ge ofiz.no.6:708-711 Je '56.
(MLRA 9:9)

1.Akademiya nauk SSSR, Geofizicheskiy institut.
(Terrestrial electricity)

MAUMYAN, V. Ya.

Composition and Properties of the High Molecular ~~(Gunka)~~ ⁶⁴⁷
Weight Fraction of Petroleum; Collection of Papers, Moscow, Izd-vo AN SSSR, 1958, 370pp.
group composition from physicochemical constants without hydrogenation
shows considerable disagreement with the composition determined on the
basis of hydrogenation, and therefore cannot be used for fractions of
polycyclic high molecular weight aromatic compounds. There are 10 tables,
1 figure, and 15 references of which 7 are Soviet, and 8 English.

Maumyan, V. Ya., Stepanyan, T.S., Misayev, M.R. Determination of the Hydro-
carbon Composition of Oil Fractions

69

In order to explain the relation between quality of oils and hydro-
carbon composition the authors studied a number of oils from the Baku
region. They came to the conclusion that the adsorption method of
analysis is the most objective one and should be recommended for the
determination of hydrocarbons in oils. It is sufficient to examine the
fraction with viscosity $E_{50} = 7$ (table 15) in order to obtain the
characteristics of the entire range of oils of the studied crude.
There are 15 tables, and 3 Soviet references.

~~TABLE 15~~

*2nd Collection of papers publ. by AU Conf, Jan 56, Moscow.

PROCESSES AND PROPERTIES INDEX

9

CA

Coefficients of linear expansion of antifriction metals. A. A. BOCHVAR AND A. A. MAURMAN. *Ligotnie Met.* 1930, 504-7.—Samples of antifriction metals were prepared in H₂, atm. and tested for their coeffs. of expansion from 20° to 200°. Sample No. 0 contains 100% Sn and has α (linear coeff. × 10⁻⁶) = 23.50; No. 1, 83% Sn, 12% Sb, α = 24.20; No. 2, 16% Sn, 15% Sb, 65% Pb and 3% Cu, α = 26.50; No. 3, 16% Sn, 15% Sb, 70% Pb, 3% Cu, α = 27.40; No. 4, 5% Sn, 15% Sb, 77% Pb, 3% Cu, α = 28.40; No. 5, 17% Sb, 81.5% Pb, 1.5% Cu, α = 29.5; No. 6, 98.9% Pb, 0.6% Cu, 0.5% Na, α = 30.3. The lowest crit. points of these alloys are, in the order given above, 232, 235, 243, 243, 243 and 325. S. I. MAMONAKY

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

SEARCH SYMBOLS

SEARCH SYMBOLS

SEARCH SYMBOLS

4

08

Laboratory study of protective copper electroplating in
 case hardening. A. M. Makhov and V. M. Makhov.
 Zhurnal SVS, No. 2, 14-15; No. 4, 26-27 (1933).
 The best results were obtained by depositing the 1st Cu
 layer from a cyanide bath at a c. d. of 0.0025-0.003 amp./
 sq. cm. for 5-10 min.; this was followed by a 2nd Cu
 layer from an acid sulfate bath at a c. d. of 0.03-0.1 amp./
 sq. cm. Chas. Plan:

850.51.5 METALLURGICAL LITERATURE CLASSIFICATION

1930-1939

1940-1949

1950-1959

1960-1969

1970-1979

1980-1989

1990-1999

2000-2009

2010-2019

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9840-9849

9850-9859

9860-9869

9870-9879

9880-9889

9890-9899

9900-9909

9910-9919

9920-9929

9930-99

Crucible for Dry Distillation of Fuel During Determination of Products of Semicoking. (In Russian.) A. A. Maiprakh. Zavodskaya Laboratoriya (Factory Laboratory), v. 14, Aug. 1948, p. 1008-1009.

Above, for determination on laboratory scale, is described. Material for the crucible and its particular shape are indicated. Its advantages are emphasized.

MAURAKH, A. A.

Cand Tech Sci

Dissertation: "Cyaniding Steels in the
Baths Containing Calcium Cyanide."

4/12/50

Moscow Order of the Labor Red Banner Higher
Technical School imeni Bauman

50 Vecheryaya Moskva

Sum 71

MAURAKH, A.A., kandidat tekhnicheskikh nauk.

New methods for increasing the wear resistance of caterpillars with open joints. Vest.mash.36 no.12:16-19 '56. (MLRA 10:2)

1. Institut mashinovedeniya Akademii nauk SSSR.
(Caterpillar tractors)

S/137/60/000/012/032/041
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No.12, p.222, # 29842

AUTHOR: Maurakh, A.A.

TITLE: Some Physico-Mechanical and Technological Properties of X12⁵1
(Kh12F1) Steel

PERIODICAL: V sb.: Povysheniye dolgovechnosti rabochikh detaley pochvoobrabat.
mashin, Moscow, Mashgiz, 1960, pp. 178 - 181

TEXT: The author studied the effect of 200-650°C tempering temperature on H_B and a_k (specimens without notches) of Kh12F1 steel oil and air-quenched from 1,050°C. It was found that H_B of steel was stable up to 500°C and equal after oil and air quenching. With a tempering temperature increased from 200 to 500°C the magnitude of a_k increases from 0.2-0.3 to 5-6 kg/cm². At 500-550°C a reduction of a_k by 1.0-1.5 kg/cm² is observed; at a further elevation of the tempering temperature to 650°C a_k increases up to 12.0 kg/cm². ✓

T. F.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

MAURAKH, M. A.; PAVLOV, Y. A.; YELYUTIN, V. P. (Prof., Dr. Tech. Sci.);

"The Interaction of Smelted Titanium with Graphite," in book The Application of Radioisotopes in Metallurgy, Symposium XXXIV; Moscow; State Publishing House for Literature on Ferrous and Nonferrous Metallurgy, 1955.

Prof. V. P. YELYUTIN, Dr. Tech. Sci.; M. A. MAURAKH, Assistant; Y. A. PAVLOV, Assistant, Chair of Rare Metal Metallurgy, Moscow Inst. of Steel im I. V. Stalin.

MAURAKH, M. A.

✓ Penetration of fused titanium into graphite. V. P. Elyutin, M. A. Maurakh, and Yu. A. Pavlov. *Izvest. Akad. Nauk SSSR, Otdel. Tekh. Nauk* 1955, No. 5, 129-35. --Chem. analysis does not lend itself readily to the detection of the penetrativity of Ti into the graphite crucible material, with the attendant Ti losses, and the Ti occasionally even passing through the crucible, damaging the furnace. The method selected for study of the penetration consisted in an application of the radioactive tracer technique, with radioactive Ti. This method was found to furnish the desired information with a min. consumption of materials. The assumption was confirmed, that the principal reason for the Ti losses was due to the metal penetration into the graphitic material, and depended on the conditions during melting and principally on the porosity of graphite. The usual electrode graphite was found to be unsuitable for that purpose. To minimize losses, the open pores must be kept at a min., excessive superheating of Ti must be avoided, and the Ti must be kept as short a time in the crucible as possible. W. M. Sternberg

YELYUTIN, V.P., professor, doktor tekhnicheskikh nauk; MAURAKH, M.A.
kandidat tekhnicheskikh nauk; PAVLOV, Yu.A., dotsent, kandidat tekhnicheskikh nauk.

Interaction of fused titanium and graphite. Sber.Inst.stali 34:115-121
'55. (MIRA 9:7)

1.Kafedra metallurgii redkikh metallov.
(Titanium--Isotopes) (Graphite)

MAURAKH, M. A.

Determining burning-on tendency of molding sands.
M. A. Maurakh. *Litovoe Proizvodstvo* 1956, No. 1, 31.
The metal under investigation is melted and a drop of it is
allowed to fall on the properly prepd. sample of the forming
sand heated to the desired temp. and held there for a pre-
dtd. time, after which the adhesion of the metal was
examd. An app. for the test (described) consists of a verti-
cal cylindrical melting chamber for metal, the bottom of
which is closed with a W drop former, and a furnace located
under the former for preheating the specimens. J. D. Gat.

016

MAURAKH, M. A.

"The Metallurgy of Zirconium" by B. Listman and J. Kerze (McGraw-Hill, New York, 1955, 780 pp) reviewed by M. A. Maurakh, Novyye Knigi za Rubezhom, Seriya B, Tekhnika, No 2, Feb 57, pp 40-43

The reviewer points out that the monograph by Listman and Kerze is one of a series of books dealing with problems of nuclear energy that is being published in the USA. He then reviews the contents of the book, chapter by chapter. In regard to chapters 4 and 5, the reviewer says that their contents, which are not described any further, are of great importance not only for scientists, but also for workers active in the industry, who will find in them many new and interesting data on the production of zirconium. Maurakh states that the data presented in Chapter 8, in which the thermal and electrical properties of zirconium are discussed, are of great value and that this chapter has been written with a great deal of care. The reviewer says that chapters 10 and 11 contain very detailed data on the mechanical and corrosion characteristics of zirconium and of its alloys; furthermore, the refractory properties of zirconium and its stability in gas media are also discussed. At the conclusion of the review, the following evaluation of the book is given:

"The book under review, to some extent, reproduces data contained in books on zirconium which have been published at an earlier date. However, the monograph in question is of greater value than editions which have been published earlier, because it contains a considerable amount of new data.

"It is difficult to find any shortcomings, because the monograph summarizes factual material which cannot be subject to any doubt. One must note the excessive volume of some chapters, for instance chapter 11, and also the excessively detailed treatment of some problems which are no longer of practical importance. On the other hand, the method of melting zirconium in arc furnaces has not been described with sufficient detail and economic data on the production of zirconium are almost entirely absent. The book under review is a valuable manual for persons who are specializing in the production of zirconium. It may be also useful for workers in industries where zirconium is being applied. Taking into consideration the large number of prospective readers and the value of the data compiled in the book, one must regard as advisable its translation into Russian." (C)

Sum. N 1451

МАУРАКХ, М. А.

"High Temperature Technology," edited by I. E. Campbell (New York, 1956, 526 pp), reviewed by M. A. Maurakh, Novyye Knigi za Rubezhom, Seriya B, Tekhnika, No 3 Mar 57, pp 34-36

The fast development of jet propulsion has drawn special attention to high-temperature-resistant materials. This monograph is a unique manual discussing a broad range of problems dealing with the production, testing, and treatment of high-temperature-resistant materials. It contains articles by 30 writers and it is edited by one of the best specialists in the field, I. E. Campbell. The book is rich in reference information and is of particular value for industrial workers using these materials. Taking into consideration the fact that no such book is available in the USSR Literature, this book should be translated into Russian. (Footnote: "The translation of the book is under way in the Publishing House of Foreign Literature.")
(U)

Sum in 1451

24-8-13/34
AUTHORS: Grigor'yev, G.A., Yelyutin, V.P. and Maurakh, M.A. (Moscow).
TITLE: Viscosity of molten titanium. (Vyazkost' rasplavlennogo titana).

PERIODICAL: "Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk" (Bulletin of the Ac.Sc., Technical Sciences Section), 1957, No.8, pp. 95-101 (U.S.S.R.)

ABSTRACT: The titanium was molten in graphite crucibles which were sufficiently dense to hold the molten titanium for twenty-five minutes without appreciable penetration of the metal into the crucible walls. The authors used the method of Meyer which was further developed by Shvidkovskiy, Ye.G. (2) and was intended for measuring torsional oscillations of a cylinder with a liquid suspended on an elastic thread and then determining the viscosity from the logarithmic damping decrement and the period of oscillation of the cylindrical crucible suspended on the thread and filled with the molten metal to be investigated. The authors used a high temperature viscosity meter embodying a vacuum resistance furnace with a carbon-graphite heater, the design of which is described by Yelyutin et alii (3), a sketch of which is shown in Fig.1, p.96. The estimated measuring error was 5 to 6% and the Ti used in the experiments was produced by

Card 1/2

Viscosity of molten titanium. (Cont.)

24-8-13/34

the magnesium-thermal method and remolten in an arc furnace; it contained less than 1% admixtures, i.e. max 0.2% Fe, max 0.2% Si, max 0.4% O, max 0.1% N. The results obtained in five series of measurements at temperatures between 1730 and 1920 C are entered in Table 2, p.100 and it can be seen from the obtained data that the viscosity decreases from 0.89 to 0.37 centistokes if the temperature increases from 1730 to 1920 C. Calculated results show that the free energy of the viscous flow is a linear function decreasing with temperature. The heat of evaporation/energy of activation of the viscous flow ratio equals 2.7. There are 2 tables, 4 figures and 10 references, 5 of which are Slavic.

SUBMITTED: April 26, 1957.

AVAILABLE: Library of Congress

Card 2/2

MAURAKH, M. A.

VLADISLAV, V.S.

65114/MSB 10031007/2008 2008 1 2007/01/20

(15)

Dr. J. (Metals Engineering
Methods in Time Vol. 1, No. 1)
Hosner, Munich, 1958.

STAYING ON TOP OF THE LATEST TRENDS

(Title page): V.B. Vladimirov, Professor (deceased); M. (Masha) Mark:
E.B. Kravchenko; Yak. M.: Z.J. Dobner; Editorial Board:
V.B. Kravchenko (Chairman and Chief M.), Doctor of Technical Sciences,
Professor, V.B. Vladimirov, Professor (deceased); A.S. Miller, Candidate of
Technical Sciences, V.B. Vladimirov, Professor (deceased); O.J. Stukhin, and
S.A. Chernavsky; Managing M. for Intensive Literature: V.B. Kravchenko,
Professor.

REMARKS: The book is a reference book for technicians and engineers working in the area of machinery design and its production.

Summary: The best covers the following: engineering specifications; treatment and use of cast iron, steel and cast alloy; heat treatment of steel and cast iron; specifications; treatment and use of nonferrous metals and nonmetallic materials; I.T. Thompson, N.Y. Springs are mentioned as being constructed in this field.

Commission and Its Allies (U.S. Monthly, Committee of Secretaries, Etc.)

- Mechanical properties
- Corrosion-resistant properties
- Titanium alloys
- Heat-treating titanium
- Titanium

4/5/65 JAW

五、结论

POLYAKOV, Aleksandr Yul'yevich; LUR'YE, I.I., kand.tekhn.nauk, retsenzent;
MAURAKH, M.A., kand.tekhn.nauk, red.; LEVIT, Ye.I., red.isd-va;
ISLENT'YEVA, P.G., tekhn.red.

[Principles of vanadium metallurgy] Osnovy metallurgii vanadiia.
Moskva, Gos.nauchno-tekhn.isd-vo lit-ry po chernoi i tsvetnoi
metallurgii, 1959. 137 p. (MIRA 12:10)
(Vanadium--Metallurgy)

NORTCOTT, L. [Northcott, L.]; MAURAKE, M.A., kand. tekhn. nauk [translator];
NATANSON, A.K., kand. tekhn. nauk; KLIMENKO, S.V., tekhn. red.

[Molybdenum. Translated from the English] Molibden; sbornik. Moskva,
Izd-vo inostr. lit-ry, 1959. 304 p. (MIRA 14:6)
(Molybdenum)

MAURAKH, M. A.

AYZENKOL'B, F. [Eisenkolb, Friedrich], prof., Dr.Ing.habil.;
MAURAKH, M.A., kand.tekhn.nauk, prepodavatel' [translator];
MOZZHUKHIN, Ye.I., kand.tekhn.nauk, prepodavatel' [translator];
NATANSON, A.K., kand.tekhn.nauk, prepodavatel' [translator];
LEVIN, B.Ye., kand.tekhn.nauk [translator]; YELIUTIN, V.P.,
prof., doktor, nauchnyy red.; RZHEZNIKOV, V.S., red.; EL'KIND,
L.M., red.izd-va; ATTOPOVICH, M.K., tekhn.red.

[Powder metallurgy] Poroshkovaya metallurgiya. Pod nauchnoi
red.V.P.Eliutina i A.K.Natansona. Moskva, Gos.nauchno-tekhn.
izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 518 p.
Translated from the German. (MIRA 13:1)

1. Kafedra metallurgii redkikh metallov i poroshkovoy metallur-
gii Moskovskogo instituta stali (for Maurekh, Mozhukhin, Natan-
son).

(Powder metallurgy)

S/123/62/000/013/020/021
A004/A101

AUTHORS: Pugin, V. S., Maurakh, M. A.

TITLE: The interaction between metal and mold in the casting of titanium

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1962, 24, abstract 13G163 (In collection: "Titan i yego splavy". No. 6, Moscow, AS USSR, 1961, 251-259)

TEXT: The authors investigated the interaction between titanium and various refractory oxides and materials suitable for the casting of titanium. Tests were carried out with BeO , ZrO_2 , TiO_2 , SiO_2 , Al_2O_3 and also with titanium carbide, graphite crushed to various fractions and colloidal graphite. Water glass, ethyl silicate, a special glue on the basis of the "Arzamid 4" formaldehyde resin, an aqueous solution of colloidal graphite, zirconium nitrate, etc. were used as binders. It was found that molds made of ZrO_2 + 15 atomic % Ti on a zirconium nitrate binder showed the highest resistance, while the optimum pouring temperature of titanium is considered to be $1,760^\circ\text{C}$. Good results were obtained in using shell molds made of ZrO_2 and Al_2O_3 on ethyl silicate. The application of ethyl zirconate as binder did not yield positive results owing to the poor quality of the latter (it is impossible to produce high-quality ethyl zirconate under laboratory conditions).
Card 1/2

The interaction between...

S/123/62/000/013/020/021
A004/A101

ditions). The application of split ceramic molds is of great interest owing to the simple technology and high precision of the castings produced, but it requires further investigations to reduce the contamination of titanium as a result of reactions with the mold. A prospective method is the production of titanium castings in shell molds on water glass. There are 2 figures and 4 references.

[Abstracter's note: Complete translation]

Card 2/2

3522h

S/148/62/000/001/009/015
E073/E535

18.12.85

AUTHORS: Voleyrik, V.V., Yelyutin, V.P., Lysov, B.S. and
Maurakh, M.A.

TITLE: Electric conductivity of solid and liquid titanium

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya
metallurgiya, no.1, 1962, 137-140

TEXT: Although data on the electric conductivity of titanium up to temperatures of 1300°C have been published, similar data relating to near-fusion temperature and to the liquid state have not been published. An electrodeless method was applied for measuring the resistivity of titanium. This is based on measuring the stationary torsion angle of a specimen suspended on an elastic thread in a rotating magnetic field. The stator coil winding of the measuring instrument was provided with a high temperature insulation and the coils were placed inside a water-cooled steel housing. Graphite heater elements were used which permitted obtaining temperatures up to 2500°C. The method of measurement of the resistivity is similar to that applied by other authors for measuring the resistivity of molten metals. The temperature
Card 1/3

X

Electric conductivity of solid ... S/148/62/000/001/009/015
E073/E535

dependence of the resistivity of titanium ρ , mhm·cm is plotted in a graph. Curve 1 represents the values obtained by the author of this paper, curves 2 and 3 are published values. For the liquid metal two values were obtained: A - for melts produced in ThO_2 or BeO crucibles, B - for melts produced in graphite crucibles. The author points out that the data for liquid titanium at 1800°C (points A and B) are not entirely reliable and should be verified with a crucible material less active towards liquid titanium than the graphite, thorium dioxide, and beryllium oxide used in these experiments. From the test results the temperature coefficients of α - and β -titanium were determined. The specific resistance of α -titanium in the temperature range 20 to 450°C can be expressed by

$$\rho_{\alpha} = 61.5 [1 + 2.48 \cdot 10^{-3} (t - 20)]$$

and for β -titanium, in the temperature range 880 to 1700°C, can be expressed by

$$\rho_{\beta} = 143 [1 + 2.13 \cdot 10^{-4} (t - 880)]$$

There are 1 figure and 11 references: 5 Soviet-bloc and 6 non-Soviet-bloc. The four latest English-language references read as follows: Ref.2: McQuillan A.D. J. Inst. Met., 78,249, 1950-51; Card 2/3

Electric conductivity of solid ... S/148/62/000/001/009/015
E073/E535

Ref.3: I.L.Wyrtt.Trans.Amer.Inst.min.(metal) Engrs.197,903,1953;

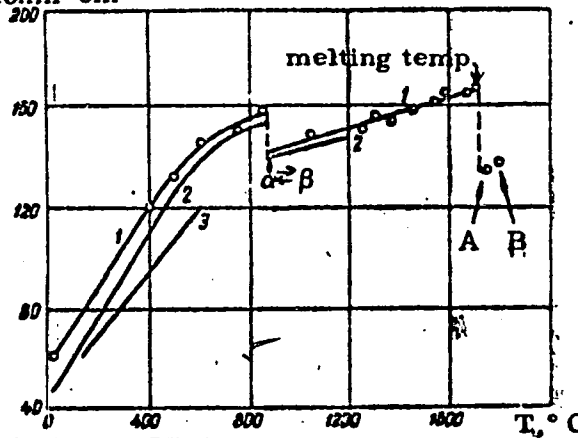
Ref.4: W.C.Michels, S.Wilford. Phys.Rev. 76,174,1949; Ref.10:

B.Weber, M.Thompson. J.Amer.Ceram.Soc. 40(11), 363, 1957.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

SUBMITTED: April 6, 1961 ρ , mohm·cm

Figure



Card 3/3

ACCESSION NR: AT4013987

S/3070/63/000/000/0178/0181

AUTHOR: Voleynik, V. V.; Yelyutin, V. P.; Ly*sov, B. S.; Maurakh, M. A.

TITLE: Instrument for measuring electric resistance of solid and melted metals at temperatures up to 2000C

SOURCE: Novy*ye mashiny* i pribory* dlya ispy*taniya metallov. Sbornik statey. Moscow, Metallurgizdat, 1963, 178-181

TOPIC TAGS: conductance measurement, solid metal conductance, liquid metal conductance, high temperature conductance, non-electrode conductance measurement, conductance measuring equipment

ABSTRACT: Using a new instrument, which is described in detail in the text, conductance in solid or liquid metals can be measured over the range 20-2000C, hence even for Ti, V or Zr. The design is based on a non-electrode method of measuring conductance in terms of the moment of forces acting on a specimen in a rotating magnetic field. The instrument has stator coils 180 cm high and located inside the housing, hence the entire assembly can be made of common structural steel. The usual operation is in an atmosphere of inert gas (argon), although tests can be carried out in a 10^{-3} mm Hg vacuum. Dependence of the angle of twist on specimen height for a specimen diameter of 14 mm was plotted in a diagram (see

Cold

1/82

ACCESSION NR: AT4013987

Fig. 1 in the Enclosure) which can be used to reduce all angles of twist to a uniform specimen height and to determine the conductance of a given material with the aid of a simple formula:

$$\phi = K \frac{\Delta \phi}{I_{\text{mean}}}$$

where K is the instrument constant determined from the angle of twist of a uniform height standard, I_{mean} is the average current intensity in stator components in amps., $\Delta \phi$, is the angle of twist reduced to uniform specimen height, in radians. Temperature was shown to have little effect on the value of K. Orig. art. has: 1 table, 2 formulas, 2 graphs.

ASSOCIATION: MOSKOVSKIY INSTITUT STALI I SPLAVOV (Moscow Steel and Alloy Institute)

SUBMITTED: 00

DATE ACQ: 20Feb64

ENCL: 01

SUB CODE: ML, SD

NO REF SOV: 003

OTHER: 001

Cord 2/12

TYURIN, G.S., kand. tekhn. nauk [translator]; YELYUTIN, A.V.,
inzh. [translator]; MAURAKH, M.A., kand. tekhn. nauk, red.

[Electron melting of metals. Translated from the English]
Elektronnaya plavka metallov. Moskva, Izd-vo "Mir," 1964.
357 p. (MIRA 18:9)

ACCESSION NR: AP4039274

S/0148/64/000/005/0117/0121

AUTHORS: Yelyutin, V.P.; Maurakh, M.A.; Pugin, V.S.

TITLE: Surface tension of Ti-Sn-Al-Fe alloys

SOURCE: IVUZ. Chernaya metallurgiya, no. 5, 1964, 117-121

TOPIC TAGS: surface tension, Ti alloy, Sn alloy, Al alloy, Fe alloy, Segden test, iron carbonyl, graphite crucible, carburization, corundum mold, ethylsilicate bond

ABSTRACT: The scarcity of data on the surface tension of rare earth metals and the total lack of information on Ti inspired the investigation of the effects of Sn, Al and Fe on the surface tension of Ti. The Segden method of testing was used (maximum gas bubble pressure in two capillaries of a different diameter). Specimens were prepared from "TG-00" Ti, spectrally pure Sn and Al, and iron carbonyl. The surface tension of all Ti-Al-Fe alloys was measured at 1750C and of Sn specimens at 1750, 1850, and 1970C. High-density graphite crucibles were used. Sn was found to lower Ti surface tension more than Al and Fe. Evidently, an increase in the

1/2

Cord

ACCESSION NR: AP4039274

surface concentration of Sn and Al which react weakly to C would lower pickup. The least carburization was observed with 8 to 14% Al and 4% Sn cast in electrolytically produced white corundum molds with an ethylsilicate bond and coated with colloidal graphite; surface smoothness was good and all specimens were readily removed without pickup. Experimental data coincided with calculations. Ti density was lowered by Al and heightened by Sn additions at about the same rate. 20% Sn increases the density of hot Ti to 4.4 g/cm³ while 20% Al decreases it to 3.8g/cm³. The authors conclude that additions of Sn in excess of 8% and of Al in excess of 10% to cast Ti alloys have a beneficial effect on the surface tension of Ti. The orig. art. has: 5 figures

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys).

SUBMITTED: 25Dec63

ENCL: 00

SUB CODE: MM

NR REF SOV: 006

OTHER: 004

Card 2/2

ACCESSION NR: AP4049031

S/0148/64/000/011/0005/0010

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Maurakh, M. A.

TITLE: The kinetics of the spreading of titanium on graphite

SOURCE: IVUZ. Chernaya metallurgiya, no. 11, 1964, 6-10

TOPIC TAGS: titanium, titanium spreading, graphite, spreading kinetics, kinematic viscosity, interphase energy

L 19837-65

ACCESSION NR: AP4049061

where m = mass of the drop, $\Delta\sigma$ = "drawing" force, p = density, x = coefficient depending on the shape of the drop, V_0 = kinematic viscosity of pure titanium, A = coefficient depending on the properties of graphite and its interaction with titanium, r = radius of the drop, and t = time. Experimental verification of the equation was then provided. Titanium of 99.85% purity was placed on a graphite surface, finegrained and with an overall porosity of 16%, at a temperature of 2000K. Temperatures were measured by a tungsten-rhenium

Card 2/3

I 19837-65

ACCESSION NR: AP4049031

SUBMITTED: 14Apr64

NO REF SOV: 006

ENCL: 00

0
SUB CODE: MM

OTHER: 004

Card 3/3

ACCESSION NR: AP4042547

S/0148/64/000/007/0159/0161

AUTHOR: Yelyutin, V. P.; Maurakh, M. A.; Pugin, V. S.

TITLE: Fluidity of binary alloys of titanium with tin, aluminum, and molybdenum

SOURCE: IVUZ. Chernaya metallurgiya, no. 7, 1964, 159-161

TOPIC TAGS: titanium tin alloy, titanium aluminum alloy, titanium molybdenum alloy, binary alloy, binary alloy fluidity

ABSTRACT: The fluidity of titanium-tin (up to 20% Sn), titanium-aluminum (up to 10% Al), and titanium-molybdenum (up to 10% Mo) alloys has been investigated. The alloys, melted in an induction furnace from titanium sponge and spectrally pure alloying metals, were poured at a constant temperature $T_p = 1.0 T_m$ (where T_p is pouring temperature and T_m is melting temperature) into graphite molds with a spiral channel. These experiments showed that tin and aluminum improved and molybdenum reduced fluidity at all investigated contents. The tin and aluminum reduce the surface tension of the titanium, which in turn decreases the tendency of the metal to adhere to the

Card 1/2

ACCESSION NR: AP4042547

walls of ceramic or graphite molds. Titanium alloys with Al or Sn can be recommended for intricately shaped castings; molybdenum is undesirable as an alloying metal for cast titanium alloys because it decreases fluidity and greatly increases the specific weight of the castings. Orig. art. has: 5 figures.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steels and Alloys)

SUBMITTED: 06Dec63

ATD PRESS: 3071

ENCL: 00

SUB CODE: MM

NO REF SOV: 004

OTHER: 001

Card

2/2

where L is the length of the solid part of the flow, U_0 is the initial flow velocity, ρ is the density, a is the average radius, and σ is the surface tension. However, this equation is not true for a flow of molten metal. After transformations:

$$L = 8,46 \sqrt{\frac{\rho a^3}{\sigma}} \left(\varphi \sqrt{2gH} + 0,5ag \sqrt{\frac{\rho a^3}{\sigma}} \right) K_1 K_2 \quad (3)$$

where σ = surface tension, φ = velocity coefficient = $\frac{U_0}{\sqrt{2gH}}$, g = acceleration due to gravity, H = height of the liquid metal in the anode, K_1 = ratio between thickness of

L 8762-65

ACCESSION NR: AP4045813

crucible floor and diameter of hole in the floor, and K_2 = coefficient depending on surface of the opening. This equation has been verified for metal flow from round openings in a ceramic crucible where $K_2 = 0.9$. In all cases, the height of liquid metal was constant (80 mm). The length of solid flow was found by using motion pictures and measurements of electric current. This relationship is shown in Fig. 2 of the Enclosure, illustrating the length of solid flow in relation to the opening diameter for liquid lead, tin, zinc, titanium and zirconium. A model unit was used of the same type as that shown in Fig. 1 with a conical crucible made of refractory material (Al_2O_3) and equipped with a nichrome heater.

L 11315-65

ACCESSION NR: AP4043306

ASSOCIATION: Hoskovskiy Institut stal i splavov (Moscow Institute
of Steel and Alloys)

SUBMITTED: 00

ATD PRESS: 3101

ENCL: 00

SUB CODE: NM

NO REF GOV: 001

OTHER: 001

YELYUTIN, V.P.; MAURAKH, M.A.; TUROV, V.D.

Apparatus for measuring the electric conductivity of liquid
chemically active refractory metals. Zav. lab. 30 no.11:
1401-1403 '64 (MIRA 18:1)

1. Moskovskiy institut stali i splavov.

L 45218-65

ACCESSION NR: AP5008384

sults was satisfactory, the deviation ranging from 5 to 40%. It is assumed that some constant was overlooked, possibly the deviation of the true graphite structure from the calculated model. Orig. art. has: 2 figures, 1 table, 7 formulas.

ASSOCIATION: Moskovskiy institut stali i splavov (Moscow Institute of Steel and Alloys)

SUBMITTED: 14Apr64

ENCL: 00

SUP CODE: MM

NO REF SOV: 005

OTHER: 000

B5B
Card 2/2

ACC NR: AP5028576	INT(m)/EWP(w)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/WH/JG
SOURCE CODE: UR/0148/65/000/011/0110/0111	
AUTHOR: Yelyutin, V. P.; Maurakh, M. A.; Turov, V. D.	
ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)	
TITLE: Viscosity and electric conductivity of molten alloys of zirconium with aluminum, silicon and niobium	
SOURCE: IVUZ. Chernaya metallurgiya, no. 11, 1965, 110-116	
TOPIC TAGS: molten metal, zirconium base alloy, aluminum, silicon, niobium, viscosity, electric conductivity, electric resistance	
ABSTRACT: Electric conductivity was investigated by the rotating magnetic field method (for description of the experimental setup cf. V. V. Volynik et al. Sb. statey: Novyye Mashiny i pribory dlya ispytaniya metallov. Metallurgizdat, 1963, 178) over a broad range of temperatures (293-2350°K) in both solid and liquid states, while viscosity was investigated in the range of temperatures 200-400° above the liquidus, for molten-state zirconium iodide and its alloys with aluminum [15, 29.5, and 30.3% (at.) Al], silicon [4.92, 9.82 and 15% (at.) Si] and niobium [5, 10, 15 and 20% (at.) Nb]. Findings: the electric resistance of Zr increases to 1.3 when this metal is in molten state but is reduced when Al, Si or Nb are added. Further, the alloying of Zr with Al, Si and Nb causes a marked decrease in its viscosity. The	
Card 1/2	UDC: 669.296'715'782'293-154:532.13:537.311

L 13069-66

ACC NR: AP5028576

strongest effect is produced by Si [to 9% (at.)] and the weakest by Nb. In systems of the eutectic type containing Zr a maximum or minimum of viscosity may appear in the eutectic on the viscosity isotherm; this is apparently due to the differences in the interaction between components. The transeutectic alloy [40.3% (at.) Al] displays an anomalous increase in electric resistance at temperatures above 2000°K, which may be attributed to the particular nature of the melting of this alloy, which is of a composition very close to that of the chemical compound Zr_5Al_3 , which remains stable until melting point: this phenomenon may be due to the continuing "association" rather than "dissociation" of this compound. On the whole these findings indicate that the investigated Zr-base alloys retain a "quasicrystalline" short-range-order structure in molten state within the range of from 100 to 150°C above the liquidus line. Orig. art. has: 3 tables, 5 figures.

SUB CODE: 11, 20/ SUBM DATE: 12Jun64/ ORIG REF: 006/ OTH REF: 008

Card 2/2 HW

L 13561-66 EWP(m)/EWP(t)/EWP(b) IJP(c) JD/JG/WB
ACC NR: AP6001238

SOURCE CODE: UR/0363/65/001/012/2208/2211

AUTHOR: Yelyutin, V.P.; Kostikov, V.I.; Levin, V.Ya.; Maurakh, M.A.; Mitin, B.S.

ORG: Institute of Steel and Alloys (Institut stali i splavov)

TITLE: Wetting of tungsten with liquid aluminum oxide

SOURCE: AN SSSR Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2208-2211

TOPIC TAGS: tungsten, aluminum oxide, silicon dioxide, molybdenum, METAL FINISHING

ABSTRACT: The wetting of tungsten and molybdenum with liquid Al_2O_3 and of tungsten with a liquid $Al_2O_3-SiO_2$ mixture was studied by placing a drop of the liquid oxide or mixture on a plate of rolled W or Mo. The drop was allowed to spread, the temperature was quickly lowered, and the area covered by the oxide was measured. A formula was derived for the dependence of this area on the mass of the drop in the absence of interaction between the liquid and solid and for small equilibrium contact angles:

$$m = \rho \pi r^2 \sqrt{k \cos \theta - 2}$$

$$m = \frac{\rho}{\sqrt{\pi}} \sqrt{k \cos \theta - 2} \cdot S^{\frac{1}{2}}$$

where S is the area of spread. S was calculated from this formula for the systems W- Al_2O_3 , W- $Al_2O_3-SiO_2$ and Mo- Al_2O_3 , and was compared with the measured values. It was shown that

Cord 1/2

UDC: 546.78:532.64

L 13561-66

ACC NR: AP6001238

as the interaction between the solid and liquid increases, the discrepancies between the two sets of values become more appreciable; in the case of $\text{Mo-Al}_2\text{O}_3$, the deviations from the calculated curve were much greater than in the case of $\text{W-Al}_2\text{O}_3$, because the effective charge of Mo is greater than that of W. Orig. art. has: 3 figures and 6 formulas.

SUB CODE: 11 / SUBM DATE: 05Jul65 / ORIG REF: 002 / OTH REF: 001

Card 2/2

L 27824-66 HPF(n)-2/EWT(m)/ETC(F)/EWG(m)/EWP(t)/ETI NW/JG/JD

ACC NR: AP6015731

(A)

SOURCE CODE: UR/0032/66/032/005/0626/0627

AUTHOR: Yelyukin, V. P.; Kostikov, V. I.; Levin, V. Ya.; Maurakh, M. A.; Mitin, B. S.

ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Unit for studying the wetting of solids with liquid refractory metals or compounds

SOURCE: Zavodskaya laboratoriya, v. 32, no. 5, 1966, 626-627

TOPIC TAGS: wetting, refractory metal, liquid metal

ABSTRACT: A unit for studying the wetting of solids with liquid refractory metals such as titanium, zirconium, vanadium, chromium, niobium, molybdenum, rhenium, tantalum, and tungsten has been designed and built. The spreading of a molten metal droplet on the solid, the contact angle, and other parameters are recorded by a high-speed motion-picture camera and can also be observed by television. The unit has a water-cooled vacuum chamber where the tested specimen (150 mm long and 50 mm wide) is placed and heated by the electric current to the desired temperature, up to 3000C. At the top of the vacuum chamber, a tiny arc furnace melts the tested metal, a droplet of which is dropped on the tested solid. A shielding gas atmosphere may be used in testing, and the vacuum in the chamber may be varied from $5 \cdot 10^{-5}$ mm Hg at room tempera-

Card 1/2

UDC: 532.23.07

L 27824-66

ACC NR: AP6015731

ture to $1 \cdot 10^{-3}$ mm Hg at 3000C. The specimen temperature is measured by an electron
pyrometer. Orig. art. has: 1 figure. [ND]

SUB CODE: 11/ 11/ SUBM DATE: none/ ORIG REF: 001/ ATD PRESS: 5003

Cord 2/2

ACC NR: AR6035413

SOURCE CODE: UR/0137/66/000/009/A013/A013

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Maurakh, M. A.

TITLE: Investigation of contact interaction between liquid titanium with graphite

SOURCE: Ref. zh. Metallurgiya, Abs. 9A81

REF SOURCE: Sb. Poverkhnostn. yavleniya v rasplavakh i voznikayushchikh iz nikh tverd. fazakh. Nal'chik, 1965, 345-351

TOPIC TAGS: titanium, liquid metal, graphite, carburization, titanium alloy, temperature dependence, porosity, surface tension

ABSTRACT: When liquid titanium comes in contact with graphite, carburization takes place, leading to solidification. The authors investigated carburization of Ti and its alloys by melting and soaking the liquid metal in the graphite crucibles under different conditions. On the basis of an analysis of the isothermal carburization curves, they determined the influence of the temperature, the porosity of the graphite, the atmosphere of the furnace, and of the alloying on the carburization process. A logarithmic equation for the kinetics of the carburization is obtained by trial and error. The viscosity of the liquid titanium increases with increasing carbon concentration, first slowly and then rapidly, this being connected with the release of carbide-phase particles from the liquid. Data are obtained on the viscosity of alloys of titanium with Fe, Si, Ni, Al, Mo, Zr, Cu, and Co. The surface tension σ of Ti was measured by the method of maximum pressure in the bubble. The carbon increases the σ

Cord 1/2

UDC: 669.295.154: [532.13 + 532.69]

ACC NR: AR6035413

of titanium. An equation is obtained for the capillary penetration of liquid titanium under conditions when it interacts chemically with the graphite. The carburization process is determined by the initial stage of the external mass transfer. An equation relating the mass of the drop with the area on which it spreads is obtained. The results of the calculation by means of this equation are compared with the experimental data on the spreading of liquid titanium and alloys over graphite with different properties. Sufficiently good agreement between the calculated and the experimental data is obtained. 6 illustrations. M. Krashennnikov [Translation of abstract]

SUB CODE: 11

Card 2/2

ACC NR: AR6035105

SOURCE CODE: UR/0137/66/000/008/E003/E003

AUTHOR: Yelyutin, V. P.; Kostikov, V. I.; Maurakh, M. A.

TITLE: Determining the spreading-rate of molten titanium over a graphite surface

SOURCE: Ref. zh. Metallurgiya, Abs. 8E15

REF SOURCE: Sb. Poverkhnostn. yavleniya v rasplavakh i voznikayushchikh iz nikh tverd. fazakh. Nal'chik, 1965, 352-357

TOPIC TAGS: titanium, graphite, molten metal, fluid kinetics

ABSTRACT: A device has been developed for investigating the kinetics of spreading of molten metal, in which the graphite and the metal are heated separately, this prevents their interaction during the heating and permits the introduction of a drop of the molten metal into contact with surface of the specimen. The kinetics of spreading of the drop was analyzed with the aid of motion-picture filming through portholes. The data on the spreading kinetics of molten titanium are presented graphically. The necessity is established for taking into account the

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UDC: 621.791.011:669.295+669.194

ACC NR: AR6035105

drop's force of gravity and its chemical reaction with graphite. V. Fomenko.
[Translation of abstract]

[NT]

SUB CODE: 11/

Card 2/2

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New products of the Czechoslovak radio industry. Tech praca
16 no.9:684-689 3 '64

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New complex of cadmium of the pyrazolone series. Pt. 2. Studii chim
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Vozdushnoe khoziaistvo avarino-spasatel'noi sluzhby. [Air equipment for life-saving service]. Moskva, Voenmorizdat, 1946. 152p. (Narodnyi komissariat Voenno-Morskogo flota SSSR. Avarino-spasatel'noe upravlenie.)

S O: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952. Unclassified.

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Vol. 6 No. 1
1954

621.735.3:621.876.45
27. 1. problem in hydraulics in respect to excavation
work by means of water jets — *Hydr. a stabilitas* 1952
Hydrologia et Hydrodynamica 1952, 1953, 1954
1953 (Journal of Hydrology — *Hydrologia Hungarica* —
Vol. 3, 1953, No. 1-2, pp. 15-21, 9 figs, 3 tabs.)

Earth may be moved by directing water jets against
the soil to be broken down. The mixture of water and
earth is then conducted through conduits or pipes to the
spot to be silted up. The pressure of the water is converted
into velocity in the nozzle of the monitor. This velocity
decreases rapidly as a consequence of the resistance and
of dispersion. The velocity at which the jet reaches the
soil determines its capacity for work by providing impact
force. The decrease in the capacity for work of under-
water jets has been determined by experiments conducted
by the author. It was found that the pressure exerted by
a water jet decreased to approx. one tenth if the tip of the
nozzle and the bank are only 20 cm apart. The conclusion
can be drawn that a water jet as thick as possible should
be applied and that the nozzle should be placed as close
to the bank as the circumstances will permit. The suction
effect of section dredges must be pressed to work to the
bottom to be dredged that the water jet should work from
the top of the bank to the bottom of the water. 27

8/24/54
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Devoted to Book Criticism", p. 395 (MELYEFITESTUDOMANYI SZEMLE, Vol. 3,
no. 8/9, Aug./Sept. 1953, Budapest, Hungary).

Source: Monthly List of East European Accessions, LC, Vol. 3, no. 5,
May 1954/Uncl.

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Vol. 4, No. 6, June 1954, P. 324.

SO: Eastern European Accessions List, Vol. 3, No. 11, Nov. 1954, L.C.

MAI RER, GY.

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(MELEPITESTUDOMANYI SZEMLE. Vol. 4, no. 10, Oct. 1954. Budapest.)

SO: Monthly List of East European Accession. (LEAL). Lc. Vol 4 Nov. 11 Nov. 1955 Uncl.

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(Boring Operations used in Soil Examination and Foundation Work);
A BOOK REVIEW

p. 333
Vol. 5, no. 7, July 1955
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SO: Monthly List of East European Accessions, (EEAL), LC, VOL. 5, no. 2
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Talajmechanika (Coil Mechanics). p. 376.

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So: East European Accession, Vol. 5, No. 5, May 1956

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Work accomplished by the Scientific Association for Transportation
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Vol. 6, No. 5, May 1956.
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Budapest, Hungary

So: East European Accession, Vol. 6, No. 2, Feb. 1957

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Report on the open discussion of the 1st volume of Műnoki kezikönyv
(Engineering Handbook), p. 287. Vol. 6, No. 6 June 1956.
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SOURCE: East European List, (EEAL) Library of Congress Vol. 6, No. 1
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Labatlan. p. 463.

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SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 9, Sept. 1957. Uncl.

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3

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1 - F/W

The quasi-centre $Q(G)$ of a group G is the subgroup generated by all cyclic subgroups of G that are permutable with all the subgroups of G . For groups G whose quasi-centre $Q(G)$ is a maximal abelian subgroup the author proves the following obvious properties: 1) The centre is a proper subgroup of $Q(G)$. 2) If $Q(G)$ is finite, then G is periodic. 3) If G is non-abelian and a direct product, and if the non-abelian components of the decomposition have maximal abelian quasi-centres, then $Q(G)$ is a maximal abelian subgroup of G . K. A. Hirsch (London).

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Some applications of continuous fractions. Gaz mat E 14 no.11:
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1. Universitatea "Babes-Bolyai", Cluj.

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1. Comunicare prezentata de academician Gr. C. Moisil.

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1. Submitted April 12, 1963.

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Phys 10 no.1:7-11 '65.

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Category: Rumania / Physical Chemistry-Molecule. Chemical bond

B-4

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29546

Author : Gabos Z., Maurer I.

Inst : Jassy Filiate of Rumanian Academy of Sciences

Title : Contribution to the Study of $H_2 +$ Ion

Orig Pub: Studii si cercetari stiint. Acad. RPR Fil. Jasi, 1954, 5, No 1-2, 79-86

Abstract: The authors consider the chemical bond of $H_2 +$, on the basis of an objective existence of electron orbit. It is assumed that in $H_2 +$ the "mutualized" electron describes about the two nuclei a trajectory of the type of a lemniscate. "Mutualization" of the electron takes place on convergence of nuclei within 1.36 A. On considering in this connection the energy of $H +$ as the sum of minimum energy of vibration of the nuclei along the axis that joints them, and assuming the vibration quantum number $v=1$, minimum electron energy is calculated as 16.29 ev and energy of dissociation as 2.75 ev, which is close to calculation results according to wave mechanics. It is noted that it was possible to find a simple explanation for the necessity of taking into account the energy at absolute zero.

Card : 1/1

-1-

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(Strojirenstvi, Vol. 3, No. 1, Jan. 1953, Praha.)

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1. Z ustavu pro higienu prace a chorob z povolani, red. prof.
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(INDUSTRIAL HYGIENE

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(VENTILATION

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Flow of incoming air from the main parts of an outlet. p. 25. (Strojirenstvi,
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SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

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prof. Dr. J. Teisinger.
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in indust. (Cz))

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